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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

MASON, DONNA K

| ART UNIT | PAPER NUMBER |
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2111

DATE MAILED: 02/17/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/918,024

Applicant(s)

ERICKSON ET AL.

Examiner

Donna K. Mason

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☒ Claim(s) 2,3,7,9 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because of the following informalities:

On page 18, line 5, insert --and-- before "there".

On page 18, line 5, insert --a-- before "selection".

Correction is required. See MPEP § 608.01(b).

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

3. The disclosure is objected to because of the following informalities:

In paragraph [0001], insert the application serial numbers filing dates for the related applications.

Each of the terms of the acronym "JTAG" (e.g., in line 2 of paragraph [0004]) should be spelled out at the first occurrence of the acronym in the specification.

In line 5 of paragraph [0022], insert --to-- after "routed".

Each of the terms of the acronym "FIFO" (e.g., in line 2 of paragraph [0047]) should be spelled out at the first occurrence of the acronym in the specification.

4. The use of the trademarks MICROSOFT WINDOWS, LINUX, AND UNIX (see line 4 of paragraph [0039]) has been noted in this application. These marks should be capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

Appropriate correction is required. See 37 CFR 1.71.

Claim Objections

5. Claims 2, 3, 7, 9, and 14 are objected to because of the following informalities:

In claim 2, line 1, each term of the acronym "JTAG" should be spelled out at the first occurrence of the acronym in the claims. (It should be noted that for examination purposes, "JTAG" has been interpreted as referring to the art accepted meaning of "Joint Technology Action Group standard".

In claim 3, line 1, each term of the acronym "IIC" should be spelled out at the first occurrence of the acronym in the claims.

In claim 7, line 1, each term of the acronym "FIFO" should be spelled out at the first occurrence of the acronym in the claims. (It should be noted that for examination purposes, "FIFO" has been interpreted as referring to the art accepted "first-in, first-out".

In claim 9, line 5, insert --;-- after "interface".

In claim 9, line 7, insert --and-- after "master;".

In claim 14, line 1, each term of the acronym "FPGA" should be spelled out at the first occurrence of the acronym in the claims.

In claim 14, line 2, each term of the acronym "EEPROM" should be spelled out at the first occurrence of the acronym in the claims.

Appropriate correction is required. See 37 CFR 1.75.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-8 and 11-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 1 recites the limitation "the first bus interface" in line 5. There is insufficient antecedent basis for this limitation in the claim. (It should be noted that for examination purposes, claim 1 has been interpreted such that --the first serial bus interface-- replaces "the first bus interface").

9. In claim 4, line 2, "further comprising" is recited. It is unclear what "further comprises" the claimed selection logic. (It should be noted that for examination purposes, claim 4 has been interpreted such that --the bus bridge further comprising-- replaces "further comprising").

10. In claim 4, lines 3-5, "the first serial bus interface can designate which of the plurality of target serial bus ports of the target serial bus interface is to receive

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commands executed by *the target serial bus interface*" is recited (emphasis added).

Based on the supporting disclosure, it appears that applicant intends to recite that first serial bus interface designates which of the plurality of target serial ports of the target serial bus interface is to receive commands executed by *the first serial bus interface*. (It should be noted that for examination purposes, claim 4 has been interpreted such that in line 5, --the first serial bus interface-- replaces "the target serial bus interface".

11. Claim 7 recites the limitation "the second serial bus interface" in line 3. There is insufficient antecedent basis for this limitation in the claim. (It should be noted that for examination purposes, claim 7 has been interpreted such that --the target serial bus interface-- replaces "the second serial bus interface", this interpretation being consistent with Fig. 8, item 808).

12. Claim 11 recites the limitation "the first serial bus interface" in line 1. There is insufficient antecedent basis for this limitation in the claim. (It should be noted that for examination purposes, claim 11 has been interpreted such that --the first bus interface-- replaces "the first serial bus interface").

13. Claim 12 recites the limitation "the apparatus coupling the first bus interface" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. The interpretation of claim 12 in view of this limitation would require undue guesswork. As a result, claim 12 and its dependent claims 13-16 have not been considered with regard to the prior art.

14. Claim 12 recites the limitation "the apparatus for coupling to a plurality of target serial bus ports" in line 2. There is insufficient antecedent basis for this limitation in the



claim. It is recommended that "the apparatus for coupling to a plurality of target serial bus ports" be changed to --the apparatus for coupling to the particular target bus port-- (as previously recited in claim 1).

15. Claim 13 recites the limitation "apparatus for coupling to a plurality of target serial busses" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

16. Claim 13 recites the limitation "the FIFOS" in line 3. There is insufficient antecedent basis for this limitation in the claim. It is recommended that "the FIFOS" be changed to --the at least one FIFO--.

17. Claim 15 recites the limitation "the target serial busses" in line 1. There is insufficient antecedent basis for this limitation in the claim.

18. Claim 16 should be reviewed with regard to the limitation "the target serial busses" in line 1, such that this limitation is consistent with any changes made to claim 15.

19. Claim 17 recites the limitation "the target serial bus port" in line 5. There is insufficient antecedent basis for this limitation in the claim.

20. Dependent claims 2, 3, 5, 6, 8, and 14 inherit the deficiencies of their respective independent claims.

Claim Rejections - 35 USC § 102

21. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

22. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S.

Patent No. 5,935,233 to Jeddelloh.

With regard to claim 1, Jeddelloh discloses a bus bridge (Fig. 2, item 56) including a first serial bus interface (Fig. 2, item 86), the first serial bus interface operable as a bus slave, a target serial bus interface (Fig. 2, item 88), the target serial bus interface operable as a bus master, and an apparatus (Fig. 2, item 90) coupling the first serial bus interface to the target serial bus interface, such that commands received by the first bus interface are capable of causing execution of commands by the target serial bus interface (column 4, lines 1-13).

With regard to claims 2 and 3, Jeddelloh discloses the bus bridge where the target serial bus interface is a JTAG bus interface, and where the first serial bus interface is an IIC bus interface (column 46-48).

Therefore, Jeddelloh reads on the invention as claimed.

23. Claims 1, 4, and 9 rejected under 35 U.S.C. 102(e) as being anticipated by U.S.

Patent No. 6,401,153 to Pawlowski.

With regard to claim 1, Pawlowski discloses a bus bridge (Fig. 2, item 16) including a first serial bus interface (Fig. 2, item 144), the first serial bus interface operable as a bus slave, a target serial bus interface (Fig. 2, items 104, 106, and 108), the target serial bus interface operable as a bus master, and an apparatus (Fig. 2, item 34) coupling the first serial bus interface to the target serial bus interface, such that commands received by the first bus interface are capable of causing execution of commands by the target serial bus interface.

With regard to claim 4, Pawlowski discloses the bus bridge where the target serial bus interface is configured with a plurality of target serial bus ports (Fig. 2, items 104, 106, and 108), and where the bus bridge further includes selection logic (Fig. 23, item 130) coupled such that the first serial bus interface can designate which of the plurality of target serial bus ports is to receive commands executed by the first serial bus interface.

With regard to claim 9, Pawlowski discloses a bus bridge (Fig. 2, item 16) including a first bus interface (Fig. 2, item 144), the first bus interface operable as a bus slave, an apparatus (Fig. 2, item 130) for selecting a particular port of a plurality of target serial bus ports (Fig. 2, items 104, 106, and 108), the apparatus for selecting a particular target bus port addressable through the first bus interface, an apparatus (Fig. 2, item 138) for coupling to the particular target bus port, the apparatus for coupling operable as a bus master, and an apparatus (Fig. 2, item 34) for transferring information between the first bus interface and the particular target bus port.

Therefore, Pawlowski reads on the invention as claimed.

Claim Rejections - 35 USC § 103

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. Claims 5, 6, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pawlowski in view of Jeddelloh.

As described above with regard to the 35 U.S.C. 102(e) rejection of claims 1, 4, and 9, Pawlowski teaches all the features of those claims. Pawlowski does not expressly disclose the features of dependent claims 5, 6, 10, and 11.

Jeddelloh discloses the features of claims 5, 6, 10, and 11. As described in column 46-48 of Jeddelloh, that patent discloses the bus bridge where the target serial bus interface is a JTAG bus interface and where the first serial bus interface is an IIC bus interface.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Jeddelloh with the bus bridge of Pawlowski. The suggestion or motivation for doing so would have been to provide expanded functionality to the bus bridge.

Therefore, it would have been obvious to combine Jeddelloh with Pawlowski to obtain the invention as specified in claims 5, 6, 10, and 11.

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26. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pawlowski in view of Jeddelloh, as applied to claim 6 above, and further in view of U.S. Patent No. 5,761,462 to Neal, et al. ("Neal").

As described above, Pawlowski in view of Jeddelloh disclose all the features of claim 6. However, Pawlowski in view of Jeddelloh does not expressly disclose the features of dependent claims 7 and 8.

Neal discloses the bus bridge, further including a first FIFO buffer (Fig. 3, item 53) coupled to pass data from the first serial bus interface to the target serial bus interface, and a second FIFO buffer (Fig. 3, item 54) coupled to pass data from the target serial bus interface to the first serial bus interface. Neal also discloses a status register (Fig. 3, item 58), readable over the first serial bus interface, and where the status register has flags for detecting data in the first FIFO buffer and the second FIFO buffer.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Neal with Pawlowski in view of Jeddelloh. The suggestion or motivation for doing so would have been to provide temporary storage space for in-bound and out-bound traffic (column 4, lines 55-62).

Therefore, it would have been obvious to combine Neal with Pawlowski in view of Jeddelloh to obtain the invention as specified in claims 7 and 8.

27. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pawlowski in view of Jeddelloh, as applied to claims 10 and 11 above, and further in

view of *Reconfigurable Computing: What, Why, and Implications for Design Automation*, by DeHon, et al. ("DeHon").

As discussed above with regard to the 35 U.S.C. 103(a) rejection of claims 10 and 11, Pawlowski in view of Jeddeloh, teach all the features of those claims. However, Pawlowski in view of Jeddeloh does not expressly disclose the features of claim 17.

DeHon discloses an FPGA having an EEPROM for storing configuration code (page 610, column 1, section 1 (Introduction)).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine DeHon with the bus bridge of Pawlowski in view Jeddeloh. The suggestion or motivation for doing so would have been increase the performance of the bus bridge (page 610, column 1, section 1).

Therefore, it would have been obvious to combine Pawlowski in view of Jeddeloh with DeHon to obtain the invention as specified in claim 17.

Conclusion


28. A shortened statutory period for reply is set to expire THREE MONTHS from the mailing date of this communication. Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this communication.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donna K. Mason whose telephone number is (703) 305-1887. The examiner can normally be reached on Monday - Friday, 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H. Rinehart can be reached on (703) 305-4815. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DKM


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